

THE DELAWARE AND HUDSON RAILROAD BULLETIN



*The
D&H*

NOVEMBER 1, 1937

Thanksgiving

*T*ODAY I saw a blind man smile
At cooing sounds a baby made;
And all around me, mile on mile,
Is your land, God, in Fall arrayed.
And as I pitied him I met
A dear old friend who cannot hear;
She talked of someone's cares and yet
Seemed not to shed a selfish tear.
And oh her faith is so divine
It made me bow my head in shame,
For blessings that were always mine
I never took the time to name.
But, God, please let me thank you now
For blessings I've just learned to know!
My grateful head I humbly bow
In prayer for all I treasure so!

—MILDRED ELLEN HARRIGAN.



The
DELAWARE AND HUDSON RAILROAD
CORPORATION



BULLETIN

Played Host at Exposition

Engineer Saw 800,000 Inspect D. & H. Locomotive Exhibit at Chicago

THE finest looking locomotive on exhibition at the Chicago 'Century of Progress' Exposition in 1934—barring none—was The Delaware and Hudson's No. 653," says retired ENGINEER ROBERT J. WALKER, who was the company's official host to the 386,000 visitors who passed through its cab and inspected the replica of the *Stourbridge Lion* between August 15 and October 31, a privilege he greatly appreciated. Other engines on display at the Fair were larger, he admits; some were more brilliantly painted, but for all-around, clean-cut, business-like appearance, "The 653" surpassed them all.

MR. WALKER left his regular run on *The Laurentian*, our crack daylight

New York-Albany-Montreal passenger train, to relieve ENGINEER ROBERT TRIMBLE, whose regular run was also on these trains, and was on duty in the cab of "The 653," answering thousands of questions about the locomotives daily until the Fair closed. During MR. WALKER'S stay the record number of people to inspect the engines in one day was 12,496, on Constitution Day; the total for the less than five months of the Fair was about 800,000, August leading with 272,913.

Supporting his contention that "The 653" is



ROBERT J. WALKER

without superior in America as far as appearance goes was the statement of a road foreman of engines who rode in her cab for part of the return trip from Chicago to Birmingham. After serving as MR. WALKER'S pilot over one operating division, that local official remarked that he had never seen a nicer looking or finer running passenger locomotive in all his many years of railroading. After the poppet valve gear with which this engine is equipped was explained to him, and he had had an opportunity to see it in operation, he became very enthusiastic over its possibilities.

While MR. WALKER was listening with a great deal of pride to many such remarks both at the

Fair and en route home, he was concealing a personal longing to get back on the job with the engine he picks as being his favorite after nearly half a century with The Delaware and Hudson, most of which was in passenger engine service—"The 652."

"I'll match our 600-class engines with anything else in the world of anywhere near the same size and weight," he says, "in service similar to that for which they were designed. Remember, we have steep grades, sharp curves, many speed restrictions in cities on the route from Albany or Troy

to Montreal. Yet you can couple a "600" on to a string of fifteen heavy Pullmans and take them over the road as fast as the restrictions will permit. They are all good, but give me the Colonie-built '652'."

"Take a trip out of Albany on *The Laurentian*, for instance. You leave Albany at 12:35 P. M., with 370 minutes to cover the 241 miles to Montreal with twelve station stops and one for coal and water. Right away you have a 15-mile-an-hour speed restriction for several city blocks to Thacher Street; Cohoes, Waterford, Mechanicville, and Saratoga also have ordinances holding you down. When you get north of Whitehall, you have a winding single track along Lake Champlain. All this means that in between you have to get over the road as fast as restrictions will permit. That calls for the best kind of a locomotive. If you get behind schedule you haven't much chance to make it up until you get beyond the Canadian border. Then you have 53 miles of relatively straight and level track, with heavy rails and rock ballast all the way to Montreal. That's where 'The 652' came in—she would take the heaviest train they gave us into Windsor Station as fast as restrictions permitted."

"How fast did you run?"

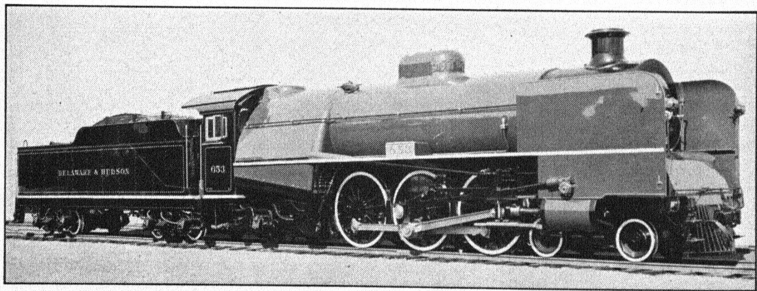
"Let me answer your question this way," MR. WALKER replies, after a minute's deliberation, "they have some mighty fast trains in that territory. Just as you leave Windsor Station you pass a sign which reads, 'SPEED LIMIT 90 M. P. H.' Sometimes we were a little late going over the border, but seldom in Montreal!"

Pulling Trains 34 and 35 was in a sense more pleasure than work for MR. WALKER who considered his position a reward for nearly 50 years of work in every type of engine service. Born on Broadway, Albany, April 17, 1868, the son of a

Hudson River lumber boat operator, he went to work at 18 as a tally boy in the Lumber District of Albany. Millions of feet of lumber arrived in Albany from the west and north over the Erie and Champlain canals every year between 1840 and 1890, to be sold here and then shipped on down the river to lumber yards in New York and New Jersey as well as to European ports. As tally boy he kept a record of the lumber unloaded from canal boats, marking down the size and quality of each piece as rapidly as the inspector could appraise it. There was a certain amount of fascination for a young man in such work, listening to the tales of the boatmen during lulls in the day's work, yet the whistling trains which passed over the Delaware and Hudson to the west of the Lumber District were even more alluring to young ROBERT.

Finally, on Saturday, December 8, 1888, he gave up his job as tally boy with the intention of taking a vacation trip before making application for work with The Delaware and Hudson. Oddly enough, he says, he never got that vacation until he went to the World's Fair in 1934, because that very afternoon he was called and hired by Master Mechanic J. L. Corey to go to work firing Locomotive 250 in Green Island Yard for Engineer "Dan" Keating. For six months he fired various bob-tailed switchers—they carried only enough coal for one shift's switching in a box on the deck of the cab, and a similar supply of water in side tanks—at Green Island before going to Whitehall to fire freights during the now historic "ice rush" in the winter of 1889. Ordinarily Capital District ice houses were supplied from local bodies of water but that year, due to the open weather, it had to be brought south from Ballston Lake and Lake Champlain. For several weeks every available car and locomotive was kept running between Whitehall and Albany with 350-ton trainloads of ice.

(Continued on page 174)



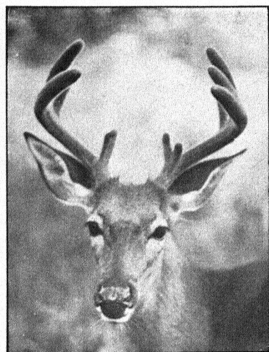
Deer Hunting in New York State

D ID you know that more deer were legally taken in counties served by The Delaware and Hudson Railroad last year than were bagged in all other counties of New York State combined? Putting it another way, there is better deer hunting in our territory than in that served by any other railroad operating in the State. The actual figures, taken from the Conservation Department's Annual Report to the Legislature, are: Total take of Deer for the State, 8,756; Taken in Delaware and Hudson territory, 4,813; Percentage of Total Take Shot in our Territory, 55.

Contrary to a very general opinion, authorities assert that there are more deer in the State of New York today than there were in the days before the coming of the White Man, despite the fact that at one time during the past century they were practically exterminated. Startling as this may sound, several very definite facts support this statement. In the first place, their number was kept down in the days when the Indians were the sole human occupants of this territory by natural enemies which preyed upon them: wolves, panthers, bobcats, lynx, and wolverenes combined to take a heavy toll of deer. Fortunately for the deer, the White Man hunted these beasts of prey so effectively that of the species of large predators named, only a scattering of bobcats remain in New York State.

More amazing is the fact that in the virgin forests which covered what is now New York State, there was less food for deer than there is today. The tall trees, with few low-hanging branches, not only furnished virtually no food for deer, but also prevented new growth which they could have eaten. The white man's axe made great clearings which eventually were covered with second growth timber, furnishing ample food for more deer than could have lived there formerly.

The traditional abundance of deer in early colonial days, when pioneers could shoot all the deer they could eat, sometimes from the doorways of their cabins, was really based on a false premise. The deer came to the White Man's clearing because there was underbrush there to feed on. What actually was happening and misleading the pioneer,

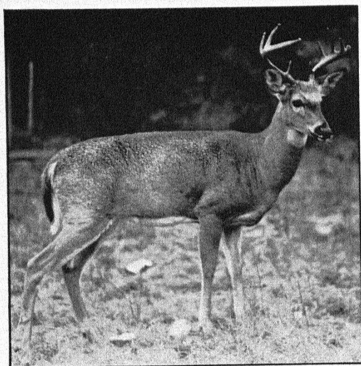


was the fact that his mode of life lured what deer there were to him. Further in the woods he would not have found nearly as many as he was led to suspect existed. In other words, he made the land support more deer than was possible before his coming.

So many deer were killed for food in colonial days, not only for the hunter's own table but for marketing as well, that people began to realize that some steps should be taken to prevent their extermination. As early as August 14, 1705, a law was passed imposing a fine of 20 shillings, or imprisonment for 20 days without bail, for killing deer at any time other than between August 1 and January 1. It also provided that dogs found hunting deer out of season might be shot and killed. Under a law passed in 1813 justices of the peace could issue search warrants to constables to look for evidence of illegal killing of deer and if such evidence was found a fine of \$12.50 was assessed.

After the Civil War, the invasion of the Adirondacks by hordes of lumbermen, together with the expansion of farming which reached its peak in 1880, proved disastrous to deer. The demand for meat, which in many cases could not be brought in from the outside, to supply the hundreds of lumber camps, resulted in the slaughter of deer in such numbers that during the final decade of the nineteenth century they approached extermination.

Fifty Years of Conservation, a book published by the New York State Conservation Department on its fiftieth anniversary in 1935, says, "The first bag limit of three deer per person and the prohibition of 'crusting' deer in yards were both enacted in 1886. The shortening of the season in 1895, the forbidding of 'hounding' a year later, of 'jacking' and killing of deer in the water on the follow-



10-Pronged Buck

ing year, all served to swell a deer population estimated at 30,000 individuals in 1895, when the kill was estimated to have been 4,900 in the Adirondacks, of which 2,694 were taken by 'hounding' and 1,233 by night hunting or 'jacking' (the hunter attracting his quarry by means of a light). These figures are significant in view of the laws subsequently passed abolishing these two methods of capture.

"Further attempts were made to stop the hunting of deer for market in 1895 by forbidding any person to kill more than two deer during the open season, only one of which could be transported when personally accompanied by the owner. The law also provided that venison should not be offered for sale during the closed season."

The passing of the 'buck law' in 1912, which stopped the killing of does and confined the bag to bucks with horns not less than three inches long, also helped restore the deer herd. One exception was made to this law when, in 1919, both bucks and does could be taken. The bucks killed that year exceeded the take in the 'buck law' years and the does shot exceeded the number of bucks, it being estimated that 20,000 deer were killed during that season. Because of its disastrous result, this experiment has never again been made, there having been more hunters afield that year than there were deer in the state.

Conservative figures on the annual take of deer were made available with the establishment of a separate deer license in 1927, containing a compulsory kill-report clause. In 1927, 6,431 were reported taken; since that time the number has

fluctuated between 6,600 and last year's reported 8,756, which set a new high. This indicates that New York's deer herd has been maintained to withstand an annual take of from 7,000 to 10,000 without danger of extermination.

Breaking down the 1936 total take in Delaware and Hudson counties, Hamilton, lying just west of Saratoga Springs and points on the Adirondack Branch, led the State with 1,583. Other counties served by Delaware and Hudson passenger trains, together with the take, were: Franklin 1,061, Essex 988, Warren 385, Delaware 174, Clinton 168, Saratoga 147, Otsego 132, Schoharie 78, Washington 50, and Rensselaer 47. Only one other county ranks with Hamilton, Franklin, and Essex in the number of deer taken: St. Lawrence, in which 1,137 were bagged.

One point to bear in mind is that the length of the season varies in different counties. Those lying in and adjacent to the Adirondacks, including Clin-



Fawn "Skulking"

ton, Essex, Franklin, Hamilton, Saratoga, and Warren in which we are interested, have a season extending from October 15 to November 15. In Catskill Mountain counties, including Delaware and Schoharie, the season is only from November 1 to November 15. Among those classified as "Outside Counties"—not lying inside the Adirondack or Catskill Forest Preserves—are included Washington which is open from October 15 to November 15; Rensselaer and Otsego (newly opened last year) with a two-week season beginning November 1. This variation in the length of the season in different areas and counties naturally affects the number of deer taken.

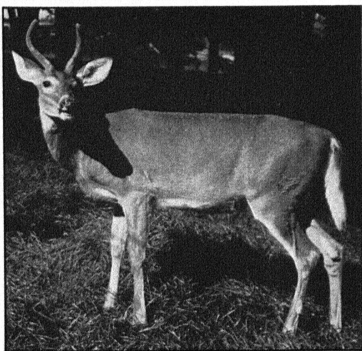
Of particular interest to Delaware and Hudson employees is the fact that exactly 30 years ago, in 1907, when automobiles were uncommon and most

of the deer taken were shipped out of the forests by express, 266 were shipped over our line from North Creek, more than from any other point in the State of New York. Other leading Delaware and Hudson shipping points were: Stony Creek 99, Riverside 23, Port Henry 15, and from ten other stations from 1 to 6, making a total shipped over our line of 418. North Creek's closest rival was Northville, on the Fonda, Johnstown & Gloversville, with 149 deer shipped.

Few people are aware of the further fact that the Delaware and Hudson was a party to an attempt made in 1901 to stock the Adirondacks with elk, or wapiti, as they are more specifically termed. The first herd of 22 was released in the Adirondacks in June 1901. The Conservation Department's *Annual Report of 1907* says that the herd was estimated to number 425. Although scattered throughout the Adirondacks, their favorite range was in northern Hamilton, southern Franklin, and western Essex counties.

Ten more were released in 1907, five at Thirteenth Lake, in Warren County, and five near the Cascade Lakes, in central Essex County. The elk were brought from Blue Mountain Forest Park, in New Hampshire, to North Creek by rail. The Delaware and Hudson making no charge for its part in their transportation. They were then taken into the woods on sleighs. Five more were released at Lake Placid. A steady growth in the herd was reported at first, the annual figures being: 1901—22, 1902—80, 1903—168, 1904—200, 1905—250, 1906—350, 1907—425. Since that time, however, they have failed to increase to a great extent and today the scattered herds are fully protected.

The deer common to New York State today are classified biologically as Virginia whitetailed deer.

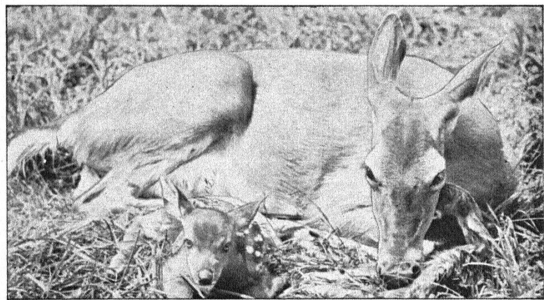


2-Pronged Yearling

The fawns of this species are usually born in May or June after a gestation period of about seven months. Almost immediately after birth the fawns "skulk," or hide themselves so effectively that it is almost impossible to find them. While some contend that the doe teaches the fawn to "skulk," a sounder theory may be that it is instinctive, as a fawn deprived of its mother at birth often will conceal itself, even in captivity, so that it is difficult to find it even though known to be somewhere in the grass of a small enclosure. A doe having a fawn for the first time usually gives birth to one only; thereafter two is the usual number, although in very rare cases she may give birth to triplets. During the summer the fawn's coat will be of a reddish-bay color and covered with white spots to aid as protective coloration. The fawn is weaned

(Continued on page 172)

*Doe with
new-born
twin fawns*



TO announce that The Delaware and Hudson has recently placed in service the world's first fusion-welded locomotive boiler is to invite the question, "Why?" In its proposal to construct the boiler, in order to obtain the permission of the Chief Inspector of the Interstate Commerce Bureau of Locomotive Inspection, the Corporation sets forth the following advantages of welding over the customary riveted joint construction:

1. Reduction to a minimum of caustic embrittlement.
2. It is stress relieved.
3. Smooth interior easier to keep clean.
4. Pitting dangers reduced.
5. Weight reduction.
6. Reduced maintenance cost.
7. Elimination of concentrated stresses at rivet zone, hence a freer breathing boiler.
8. Improved design is made possible.

Caustic embrittlement in boiler plates is caused by the combined action of stress and chemical attack by the water in the event that, as is quite often the case, it contains sodium-hydroxide or caustic soda. No steel suitable for boiler plate has yet been found which is resistant to the action of caustic soda. Embrittlement cracks, which are usually located in or close to riveted seams, present a source of trouble in the maintenance of locomotive boilers. While chemical treatment of the boiler water may decrease embrittlement to some extent, it is impractical to completely overcome it in this manner. By eliminating the riveted seams the usually serious zone of embrittlement is removed, greatly lessening the possibility of the occurrence of this phenomenon.

In the construction of a riveted boiler the operations of rolling the various curved sheets from flat plate while cold, the heavy pressure required for the driving of rivets, and the shrinkage of the hot-driven rivets as they cool, set up stresses between the various parts of the boiler and within the metal itself. Caulking of the outer edge, or welt strip of the riveted joint and the rivet heads may also set up a stress condition later manifested by the development of incipient cracks in the metal surface.

Replacing the riveting by welding eliminates this cause of sheet cracking, as it does pitting of the plate adjacent to the usual caulking edges. Where riveting requires the use of two, and sometimes three, thicknesses of overlapping metal to provide joints of ample strength, only a single layer is needed when welded, thus effecting a saving in weight of 3,780 pounds in this particular case, a major consideration in modern locomotive design.

The welded boiler should very materially lower

World's First Welded



Locomotive No. 1219, Rebuilt

maintenance costs. This results from the elimination in the welding process of most of the operations which set up stresses in riveted structures, and from the final annealing which reduces any such stresses as may exist.

With this brief explanation of the "why" of the welded locomotive boiler, let us pass on to the infinite precautions which were taken to insure that every detail of design, construction, material and workmanship was of the highest possible order.

The boiler shell and firebox are of silicon killed steel made by the open hearth process, cast into ingots with special "Hot Tops." The ingots were first rolled into slabs, then chipped to remove surface imperfections, after which they were reheated and rolled into plates. The tubes and flues are of Electrunite steel.

The boiler shell and outside firebox unit is unique in that it is built up from only four sheets of steel, the back head, wrapper sheet, throat sheet and a single sheet which forms the entire barrel course. The front tube sheet, firebox, smoke box and steam dome are also welded in place, although one row of staybolts extending through the Wilson-type mudring acts as a reinforcement to the welding around the bottom of the firebox. This type of ring lends itself to the welded construction especially well, since all welding can be done from the outside. The U-shaped cross section of the ring also facilitates the removal of accumulated scale from the space around the bottom of the firebox at washout periods.

ed Locomotive Boiler



9, Rebuilt at Colonie Shops

When the various sheets had been shaped in the usual manner by rolling or by flanging presses, sub-assemblies of the barrel course and dome, wrapper sheet, back head and throat sheet, etc., were bolted up and clamped in position, allowing proper spacing to provide for the welds. Where practicable, test plates were located in prolongation of the welds and so clamped in position that they were joined by the extension of the weld. Tensile and bend tests subsequently carried out with these plates and the included specimen welds were used to determine the quality of the work. As a further check, specimens of the metal from the weld were tested as to their specific gravity. In addition, radiographs, or X-ray photographs were made of the welding throughout the boiler in order to insure against the inclusion of slag or the presence of cavities in the weld metal. It was possible to detect cracks, zones of incomplete fusion and porous welds by this means.

All internal attachments were seal-welded in such a way as to prevent the entrance of water between them and the shell proper, and all internal surfaces were kept smooth and unbroken by stud or rivet holes as a further protection against corrosion or embrittlement.

Upon completion of the shell and outside firebox unit it was shipped to the plant of The Combustion Engineering Company, Chattanooga, Tenn., where, in one of the two largest annealing furnaces in the country, it was stress relieved. This was done by slowly heating the metal to a temperature

of between 1100 and 1200 degrees Fahrenheit, thermocouples at a dozen different points on the surface of the boiler being used to indicate the variation in temperature throughout. After four hours of "soaking" at this temperature, the steel was allowed to cool gradually to room temperature.

Following the application of the firebox, flues, tubes and appurtenances, the complete boiler was subjected to the usual hydrostatic and steam tests prescribed by the I. C. C. Rules and Regulations, excepting that the hydrostatic pressure was increased to $1\frac{1}{2}$ times the working pressure.

Great care was used to insure against the existence of internal stresses in the finished boiler, provision being made for their relief at various points in the course of construction in addition to the final operation referred to above.

In order that the welding might be done downward, special apparatus was devised to support the boiler while under construction in order that it might be revolved as necessary. Taking of the radiographs also necessitated swinging the welds into position before the "camera," the boiler being revolved to accommodate it.

No studs or rivets were applied to the boiler shell with the exception of the rivets used for the attachment of the boiler brace feet. Pads or flanges were welded to the boiler and drilled and tapped as needed to accommodate washout plugs and boiler check valves. Stud hubs were welded to the shell for the application of handrails and sandboxes. Strict rules prohibited the drilling of any holes within certain minimum distances from the welds, the location of which was marked on the finished boiler by painting lines on its surface, as a guide during the construction of the locomotive, so perfectly did the welds blend with the appearance of the surface of the sheets.

After mounting on the frames, the boiler was used in stationary service for a period of six weeks, a temporary stack being applied for the duration of that period, at the end of which the construction of the locomotive was completed.

Special provision is made for the removal of the jacket and lagging surrounding the boiler so that all seams may be examined quarterly during the first year in service, semi-annually during the second year, and then annually thereafter for a period of five years.

The boiler is of the wide firebox, conical, radial-stayed type, with a sloping back head, designed to operate at a working pressure of 225 pounds per square inch.

The boiler was mounted on the chassis of Locomotive 1219, Class E-6-A, reconstructed by the

(Skip one page)

— The —
Delaware and Hudson Railroad
CORPORATION
BULLETIN

Office of Publication:
DELAWARE AND HUDSON BUILDING,
ALBANY, N. Y.

PUBLISHED MONTHLY by The Delaware and Hudson Railroad Corporation, for the information of the men who operate the railroad, in the belief that mutual understanding of the problems we all have to meet will help us to solve them for our mutual welfare.

All communications should be addressed to the Supervisor of Publications, Delaware and Hudson Building, Albany, N. Y.

Vol. 17 November 1, 1937 No. 11

On Paper

ONE of the western railroads not long ago issued a booklet entitled "Better Letters" for the guidance of all employees who handle correspondence. While primarily for the guidance of those engaged in contacting outside sources, the book gives many pointers the observance of which will tend to smooth the flow of interdepartmental correspondence and make more pleasant the relations of each employee with his fellows, many of whom he may "meet" only by mail.

The manual places particular emphasis on "the opportunities which each of our letters affords to win friends and willing cooperation." Contained in it are chapters on "Writing to the Reader's Viewpoint," "Opening, Developing, and Closing the Letter," and "Winning a Favorable Personal Reaction," also proper forms of addressing persons in all walks of life.

In an introductory message by the President are contained the following paragraphs which might well be given thoughtful consideration by anyone:

"Let us have letters that speed the business, win business friends, and stimulate teamwork among ourselves.

"To quicken our transactions, let us have promptness in correspondence. Let us take advantage of the definiteness of the written word, striving to make each letter so clear, concise and complete that it will either conclude the matter dealt with or advance it as far as possible towards final disposition.

"Let us write always in good spirit, with a sincere effort to be helpful to the person addressed.

"Finally, let us bear in mind that by our letters

we are likely to be judged; the Southern Pacific Company as to its ideals, policies and service, and the individual as to his character and quality of mind."

How will your letters come up to these standards?

Ideas

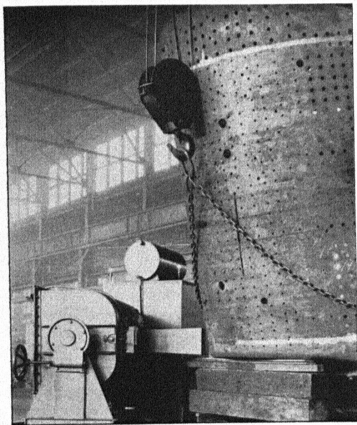
IDEAS, says Charles A. Beard in the *Journal of Adult Education*, are powerful things. They may be divided for convenience into two broad classes: Ideas that represent facts, and ideas that express hopes, ideals, and opinions that are not easily checked against cold facts. The work of educating one's self, he continues, includes the increase of knowledge and the exploration of opinions. If we wish to increase knowledge and diminish delusions, he points out, we should look for interests wherever we encounter ideas and look for ideas wherever we encounter interests. He then offers two suggestions as to how to make a beginning at this kind of education.

First, he recommends, take up a book on some subject with which you have more than casual familiarity. Sharpen two pencils, one black and the other red. Underline in black each sentence or word that expresses a fact that you know to be a fact or can verify as such. Underline in red each word or sentence that expresses a mere opinion as to the desirability or undesirability of the matter in hand. When you have finished look it all over. Then do the same thing with the works of three or four writers who are pretending to inform the public on current affairs. Two benefits will result. You will sharpen your wits for reading and for the quest for truth. You will have some basis for discrimination among those pretending to instruct you. Surely the process is educative and the outcome is educational.

Second, he continues, make a special exploration of fifty or a hundred words commonly used in the discussion of human affairs. Ideas, whether as knowledge or opinion, are expressed in words. Most of us use words without much exploration of them, especially as we render opinions of which we are sure. Even those who imagine themselves educated will be jarred severely if they select a few words in common usage, such as interest, progress, economics, and politics, and look them up in a big dictionary—the bigger the better. Anyone who has done this a few times will never be content with a little dictionary and he will find his powers of critical insight and accurate expression strangely enlarged. The experiment is both informing and exhilarating.

Welded Boiler

(Continued from page 169)



Taking X-rays of Welded Seams

Colonie Locomotive Shops. Among its distinguishing features are the headlight which, instead of resting on a projecting shelf, is neatly set into the smoke box front as is standard practice on The Delaware and Hudson's new power. Two air compressors are mounted on the forward deck below the smoke box and an air-operated whistle is located in front of the stack.

A unique feature is the double running board arrangement at either side of the boiler barrel. Between the upper and lower sections is placed the piping which is usually either exposed to full view or, as in recent Delaware and Hudson practice, concealed beneath the jacket. By removing the upper section the piping becomes readily accessible for inspection or repair.

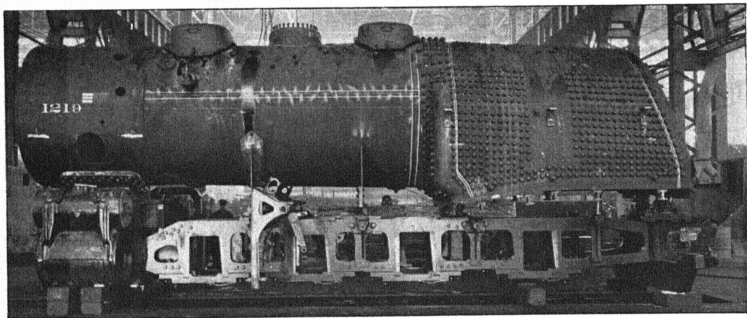
In order to avoid all possible stresses in the boiler the expansion sheets commonly used to support the firebox have been replaced by sliding shoes which move in an oil bath through a distance of $\frac{3}{8}$ to $\frac{3}{4}$ -inch as the boiler changes in temperature.

Difficulty sometimes experienced with cracked guide yokes or the angles by means of which they are secured to the boiler or frames has been avoided by the use of "Slidguide," a patented device which relieves the stresses in the crosshead guides and cylinders as they expand and contract.

Since studs and rivets ordinarily used to fasten attachments to the boiler shell have been eliminated, the running boards are supported by brackets carried by the main frames.

An air-operated bell-clapper, mechanical force-fed lubricators and special mechanical lubricators for the air compressors, steam-operated cylinder cocks, and the English-type cab standard on Delaware and Hudson power will also be noted. No. 1219, which is of the Consolidation type, (2-8-0), carries 225 pounds of steam, and has 27- by 32-inch cylinders and 63-inch drivers.

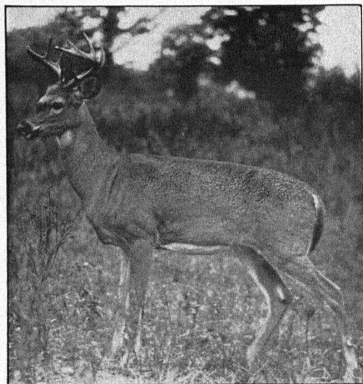
In service between Oneonta, N. Y., and Wilkes-Barre, Pa., "The 1219" has already been the subject of much favorable comment regarding both appearance and performance.



Painted lines indicate welds, except where smokebox joins barrel course

Deer Hunting

(Continued from page 167)



at four months, males usually remaining near the mother for one year, females for two. In September the fawn's white-spotted coat changes from bay-red to solid gray-tan and the spots fade.

Adult deer, both bucks and does, change their coats twice annually. In the summer they are "in the red" or reddish-bay, the hairs being short and thin. The winter hairs grow out of the same follicles as the summer hairs, but are larger in diameter, are filled with pith, and are easily broken. These large-diameter, air-filled hairs make the winter coat very warm and, together with its layers of fat, give a dead deer so much buoyancy that it will usually float in winter whereas it might sink in the summer. This coat reaches its full development in January when it is gray.

In September and October, when the deer are sleek and fat, comes the mating time or "rutting season." The buck is then fully antlered and his neck swells in diameter, sometimes attaining an increase of ten inches in circumference. He picks up the track of a doe and follows it, actually chasing her through the forest. If, in the course of his roving, he meets another buck, they may fight. After the first rush, fighting bucks simply stand and push each other back and forth, sometimes for an hour or two. They do not, however, step back and charge again and again as is the case with goats. Sometimes, in the course of their pushing and bullying, their antlers become locked and they die of starvation together. After meeting a doe, they mate, the buck remaining with her for

a few days only, before again starting off in search of other does. Incidentally, a ratio of one buck to four does is believed sufficient for breeding purposes in the wild; in captivity one to ten has been found not excessive.

After the mating season the bucks, does, and fawns may band together in herds. In deep snow, they "yard," or remain in the same locality where, by continually traveling in search of food over a limited area, they keep the snow packed down, thereby helping themselves in their search for food.

The buck's antlers are of sufficient interest to warrant separate treatment. After the mating season the antlers are shed and in the spring, or when the deep snow is gone, the buck wanders off by himself. From two to six weeks after losing his antlers a new set buds, reaching full size by August. It is believed that it takes as much energy to grow a pair of antlers as it does for a doe to produce a pair of fawns. Antlers are bone, rather than horn, and grow very rapidly due to a complicated and extensive system of blood vessels which run through them. While growing they are said to be "in the velvet," the "velvet" really being a skin covered with a fine hair. At this stage the antlers are warm to the touch, very sensitive to insect bites or other injuries, bleed if cut, and are soft in structure. They are so pliant, in fact, that any injury or interruption to growth suffered in this period remains a permanent injury to that year's set, and may alter their shape.

By August the new set of antlers is fully grown and the buck begins to rub off the velvet on bushes and trees. The velvet or skin comes off in long strips, revealing the antlers underneath, which the buck then polishes by additional rubbing.

Contrary to another general belief, the age of a buck cannot always be told by the number of points on his antlers. A yearling buck usually has only two prongs. Each year thereafter until he reaches his prime at from 7 to 8 years, the antlers usually increase in size and number of points. However, the buck may live from two to seven years more, during which time they again may become smaller, although they may develop an abnormal cragginess. It is therefore possible to shoot a deer with relatively few points with the thought that he is a young buck when, in reality, he may be an old one past his prime. Occasionally, too, does are shot bearing spike horns, although these are usually covered with hairy skin. To shoot such a doe in New York State is not illegal, however, as the law states that "deer bearing horns not less than three inches in length may be taken."

Because of the provision in the State Constitution that timber in the Adirondack Forest Preserve may

not be cut, that area has probably reached its deer carrying capacity. The deer herd probably will not increase, and in some sections it has become necessary to provide food for them to prevent starvation in winter. In the Catskill Mountain region this point has not yet been reached and there is evidence that the herd is on the increase, as is the case in the so-called "outside counties."

Another bit of misinformation about deer—that they can subsist solely on balsam—has been discredited in tests conducted by the Conservation Department. Deer fed exclusively on balsam died of starvation, despite the fact that they ate great quantities of it.

Those considering making their first deer hunting trip are reminded that a special license is required and, if a deer is bagged, this fact must be reported to the Conservation Department, Albany, N. Y., by registered mail on or before the following November 20th, using the space provided for the purpose on the reverse side of the deer license. Further information as to the dates deer may be taken in various counties—there is no open season in New York State, only exceptions to the law by counties—may be obtained from game wardens, the *Syllabus of the Laws Relating to Fish and Game for 1937*, published in handy pocket form by the Conservation Department and distributed by officials who issue hunting licenses, or by direct application to the Department.

Authorities have made surveys which show that three out of four deer hunters cannot accurately locate the heart area on a deer. Note, in the accompanying illustration of a deer's outline and skeleton, that the heart is just above the elbow and behind the shoulder. A shot to the rear may only wound

a deer. A well placed shot is the mark of an experienced hunter.

Some of our readers, particularly those living in the Adirondack and Catskill Mountain areas, are well acquainted with deer and the points where they are most apt to be taken. Many who would hesitate to risk their personal automobiles on mountain roads may reach the best deer hunting country in the State by Delaware and Hudson passenger train, making arrangements locally for transportation into the woods. All are urged to follow the general custom of wearing red caps and jackets to avoid being mistaken for deer. By all means, look before you shoot! Judging by the take in recent years, from 6,000 to 10,000 bucks will be bagged in New York State this year, over half of which will come from territory served by our lines. These are points to remember when you hear your friends planning deer hunting trips this month. And finally, to those who go, here's luck!

(We are indebted to the Bureau of Game, New York State Conservation Department, for the information contained in this story, together with the photographs of the fawn "skulking," the doe and her twin fawns, and the diagram showing location of the deer's heart. All other illustrations are Delaware and Hudson Photos.)

The American System

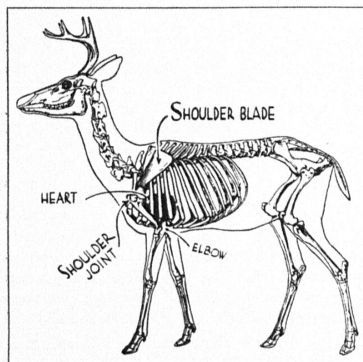
ON all sides, one hears references to standards of living. Some speak of high standards, and some speak of low standards.

What is really meant is the kind of life that each individual lives. In the same way, the standard of living of a country is determined by the amount of luxuries as well as necessities it supplies to its citizens.

Applying this yardstick to the United States, here is what we find:

In the United States, there is one radio to every 6 persons; in Europe, including much-talked-of Russia, there is one radio to every 17. In the United States there is one mile of railroad to each 500 citizens; in Europe, there is one mile to each 2,000.

The United States has one telephone for every 7 persons; Europe has one for every 35. The United States has one automobile for every 5 persons; Europe has one for every 59. Ten out of every 50 Americans use electric lights; 10 out of every 75 Europeans are electric light customers. In the United States, life insurance averages \$864 a person; in Europe it averages \$69 a person.—*The Carnation.*



Played Host

(Continued from page 164)

At that time on that 77-mile run they took water at Fort Edward, Saratoga Springs and Mechanicville; today trains run all the way from Albany to Montreal, stopping only twice for water, at Whitehall and South Junction.

Later he became "Mike" Corbett's regular fireman on Trains 43 and 44, second class freights running on time table schedules between Whitehall and Rouses Point. After one year on that run, MR. WALKER returned to Albany to fire a switcher for John A. Price in the North Albany Yard. For some time, too, he fired the Breaker Island job, an engine which did nothing but switch cars in and out of the blast furnace which then stood on the island. Of particular interest in this connection is the fact that some of the steel produced there was ferried across the Hudson River to the Troy Iron and Steel Company plant on a boat operated for that specific purpose.

Excursions were so popular in the nineties that two train and engine crews were assigned each summer to handle these trains on the Saratoga and Champlain Divisions. Trains were run from Albany, Troy and Schenectady to points on Lake Champlain, Lake George, Ballston Lake; others were operated from Rutland to these points. For three years he fired for Engineer Thomas Hardy, on these excursion runs. They had the same engine, usually "The 183" all summer, and because of the fact that they worked out of various terminals, it was their duty to keep her cleaned and polished all the time.

The business depression of the nineties delayed promotion to the rank of engineer for many firemen of that period, MR. WALKER continuing as such long after he would have been promoted in normal times. For two years, beginning in 1896, he fired passenger Trains 33 and 44, leaving Albany station at 7 A. M. for Lake George and beginning the return trip at 4:40 P. M. with the "boat train" which was due to arrive at the night boat landing in Albany at 7:15 P. M.

Just before the turn of the century, in 1899, MR. WALKER became an engineer, at first running extra out of Green Island and later, for two years, "on the rounds" out of Whitehall. One job he held which no longer exists was the National Express run between Albany and Troy. They made three round trips daily: one with express from the West Shore to leave Troy on No. 7, returning with a car from No. 8 for Albany; on the second trip they went to Troy and then to Mechanicville with express for shipment to Boston over the

Boston and Maine; and on the third trip, they took one West Shore car and a car loaded in Albany to Troy, completing the day's work with the return run to the Livingston Avenue (Albany) roundhouse. Later on he pulled Trains 39 and 46 between Troy and Lake George.

MR. WALKER went back on the through main line passenger trains when he bid in the runs on Nos. 4 and 7 between Albany and Whitehall. When *The Laurentian* was inaugurated MR. WALKER became one of her first three regular engineers. Upon his return from the World's Fair in 1934 he returned to this service, continuing until retired on pension July 18, 1936.

MR. and Mrs. WALKER have one daughter, Mrs. H. E. Marston, and one granddaughter, who live with them in their home at 12 Brookside Avenue, Menands. MR. WALKER is a member of The Delaware and Hudson Veterans' Association; the Brotherhood of Locomotive Engineers; and the Knights of Columbus, having served for seven years as Captain of the Guard; he attends St. Joan of Arc Church, Menands, being a member of its Holy Name Society.

Take Deep Breaths

LIFE is the interval between one breath and another, according to the Sanscrit, which goes on to say that he who only half breathes only half lives.

When we feel depressed we practically stop breathing. When we are excited, our breath comes quickly but not very deep. We usually associate deep breathing with a calm, serene mental attitude. Folks of a pessimistic turn of mind are generally shallow breathers while optimists inhale deeply.

According to the psychologists, we can control our moods by our breathing. Deep draughts of oxygen carried into the lungs will dissipate the black clouds of despair, replacing them with the sunshine of hope. Lack of a sufficient supply of this life-sustaining element has caused men to fail in their attempts to reach high altitudes, whether in mountain climbing, airplane flight, or in the humdrum of the daily routine.

Opening the windows, filling your lungs with oxygen, will fill your heart with a song and your soul with new hope, not to mention strengthening your body and mind for the successful continuation of your work. And the very act of squaring your shoulders and throwing your head back restores a feeling of confidence and self-respect that is lacking when the head is bowed and the shoulders sag.

Clicks from the Rails

Unconscious of Danger

an inebriated gentleman selected the main line of the L. & N. near Springfield, Tenn., as a peaceful spot to fall into the arms of Morpheus. As he slumbered, along came No. 51, whose watchful engineer spied the reclining figure, head pillowed on the west rail, in time to bring his train to a stop about five feet from it. As the fireman was removing the "obstruction," up came "the law," the trespasser passing the remainder of the night in a cell, oblivious to everything, including his narrow escape from the morgue.



Stopping a Train

at three different places by pulling the emergency cord cost Jagga Raju, a passenger on the crack "Calcutta Mail," a \$20 fine. Summoned before a magistrate for his offense, the Indian complained that he was nearly suffocated by overcrowding in the train; 78 passengers having been riding in a 58-passenger capacity car. Ruling that he could have registered his complaint in a less drastic manner, the magistrate assessed a fine.



A Correspondence Course

in locomotive operation was claimed by a "gob" on shore leave at Tsingtao, China, to qualify him for an experimental tour of the yards at 4 A. M. A toot of the whistle and a 100-yard dash through an open switch and onto the ground terminated the trip, as far as the locomotive was concerned, the "skipper" landing in the local jail.



Racing Trains

appears to be the hobby of a 6-year-old horse of Reading, Pa., which recently galloped into town a dozen lengths ahead of the local freight after having raced for half a mile ahead of an express a few minutes previous.

Bees in His Bonnet

did not happen to be the original affliction of a Budapest bee-keeper who landed in an insane asylum as the result of attempting to carry two swarms of the industrious insects in milk jugs, the mouths of which he covered with brown paper, the whole being placed beneath the seat of the railway compartment in which he was to travel. Piercing the paper, the bees started in solemn procession up the inside of his trouser leg, stinging as they went. In a frenzy, the bee-keeper begged his traveling companions, two ladies, to leave the compartment after which he removed the garment and shook it out of the window. A passing express snatched it (or them) from his hands, thus creating a situation which added realism to the cry of "Madman" set up by the ejected ladies, and resulted in his incarceration in the asylum for several days before the doctors would believe that bees were at the seat of the trouble.



Locomotive Construction

is being influenced by the automotive industry, according to a recent Associated Press dispatch, which says: "The Baltimore and Ohio's new 3,600-horsepower streamlined locomotive has in the engineer's cab: A vacuum windshield wiper and a defroster to keep snow and sleet off the windshield; no-draft ventilation; and a speedometer—something a weather-beaten engineer of bygone days would regard as downright sissy!"



A Rat Was Caught

between the points of a switch by a Great Western Railway (England) switchman, a feat that could hardly have been done except by accident. When he could not completely throw the switch to let a freight into a siding, the switchman looked to see what was wrong and found the body of the rodent.

Increased Traction

is given by the narrow gauge Decauville Railway, of Chile, as the explanation of its use of one rail of steel and one of wood. The car wheels have a double flange on the side using the steel rail while those running on the wooden rails are flangeless. Sand dropped onto the wooden rail is ground into the grain of the timbers, not only afford better traction but requiring less frequent renewal, according to United States Consul Faust of Santiago.



Frantic Stop Signals

from a young lady driving wildly along the highway parallel to the L. & N. tracks between Carmi and Epworth, Ill., brought the "Dixie Limited" to an unscheduled stop at the latter point, the engineer thinking that he might receive a warning of danger ahead. Rushing up to the open door of the baggage car the girl smiled sweetly and asked, "Can I mail this letter on your train, please?" She won't try that again!



A Submarine Railway

is proposed to connect the Japanese island of Kyushu with the Korean mainland, a tunnel some 160 miles long being built about 150 feet below the surface of the sea to permit railway service to reduce to 5 hours the present ferry trip of 8. Estimated to cost about 500 million dollars, construction would take about 10 years.



A Carload of Matches

caught fire recently at Kansas City offering quite a problem to firemen since there was no water at hand and 500 cases of inflammable lading seemed due to go up in a lot of smoke. A switch engine pushed the car 14 blocks to a hydrant where the fire was fought to a standstill, only 60 cases being destroyed.

Worth

THERE is no readier way for a man to bring his own worth into question, than by endeavoring to detract from the worth of the other man.—TILLOTSON.